

City of Wichita

Consumer Confidence Report – 2012

Covering Calendar Year – 2011



This brochure is a snapshot of the quality of the water that we provided last year. Included are the details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies. It is important that customers be aware of the efforts that are made continually to improve their water systems. For more information please contact, Debra Ary at 316-269-4760.

Our drinking water is supplied from ground water wells and surface water blended before treatment. Your water is treated to remove several contaminants and a disinfectant is added to protect you against microbial contaminants. The Safe Drinking Water Act (SDWA) required states to develop a Source Water Assessment (SWA) for each public water supply that treats and distributes raw source water in order to identify potential contamination sources. The state has completed an assessment of our source water. For results of the assessment, please contact us or view on-line at: <http://www.kdheks.gov/nps/swap/SWreports.html>

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) included rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water before we treat it include:
Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, livestock operations and wildlife.
Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
Pesticides and herbicides, which may come from a variety of sources such as storm water run-off, agriculture, and residential users.
Radioactive contaminants, which can be naturally occurring or the result of mining activity.
Organic contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also come from gas stations, urban storm water run-off, and septic systems.

In order to ensure that tap water is safe to drink, EPA prescribes regulation

which limits the amount of certain contaminants in water provided by public

water systems. We treat our water according to EPA's regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Our water system is required to test a minimum of 180 samples per month in accordance with the Total Coliform Rule for microbiological contaminants. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public.

Water Quality Data

The following tables list all of the drinking water contaminants which were detected during the 2011 calendar year. The presence of these contaminants does not necessarily indicate the water poses a health risk. Unless noted, the data presented in this table is from the testing done January 1- December 31, 2011. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old. **The bottom line is that the water that is provided to you is safe.**

Terms & Abbreviations

Maximum Contaminant Level Goal (MCLG): the "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL): the "Maximum Allowed" MCL is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Secondary Maximum Contaminant Level (SMCL): recommended level for a contaminant that is not regulated and has no MCL.

Action Level (AL): the concentration of a contaminant that, if exceeded, triggers treatment or other requirements.

Treatment Technique (TT): a required process intended to reduce levels of a contaminant in drinking water.

Maximum

Maximum Residual Disinfectant Level (MRDL): the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Non-Detects (ND): lab analysis indicates that the contaminant is not present.

Parts per Million (ppm) or milligrams per liter (mg/l)

Parts per Billion (ppb) or micrograms per liter (µg/l)

Picocuries per Liter (pCi/L): a measure of the radioactivity in water.

Millirems per Year (mrem/yr): measure of radiation absorbed by the body.

Million Fibers per Liter (MFL): a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU): a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is not regulated for groundwater systems.

Running Annual Average (RAA): an average of sample results obtained over the most current 12 months and used to determine compliance with MCLs.

Testing Results for: City of Wichita

Microbiological	Result	MCL	MCLG	Typical Source
COLIFORM (TCR)	In the month of February, 1.05% of samples returned as positive	MCL: Systems that Collect 40 or More Samples per Month - No more than 5% positive monthly samples;	0	Naturally present in the environment

Regulated Contaminants	Collection Date	Your Highest Value	Range (low/high)	Unit	MCL	MCLG	Typical Source
ARSENIC	5/23/2011	2.1	2.1	ppb	10	0	Erosion of natural deposits
BARIUM	5/23/2011	0.044	0.044	ppm	2	2	Erosion of natural deposits
CHROMIUM	5/23/2011	1.1	1.1	ppb	100	100	Erosion of natural deposits
FLUORIDE	5/23/2011	0.32	0.32	ppm	4	4	Erosion of natural deposits
NITRATE	5/23/2011	1.4	0.81 - 1.4	ppm	10	10	Runoff from fertilizer use
SELENIUM	5/23/2011	3.2	3.2	ppb	50	50	Erosion of natural deposits
TURBIDITY	6/14/2011	0.25	0.25	NTU	1		Soil runoff

Disinfection Byproducts	Monitoring Period	Your Highest RAA	Range (low/high)	Unit	MCL	MCLG	Typical Source
BROMATE	2011	6.2	ND - 14	ppb	10	0	By-product of drinking water disinfection
TOTAL HALOACETIC ACIDS (HAA5)	2011	11	4.9 - 11	ppb	60	0	By-product of drinking water disinfection
TOTAL TRIHALOMETHANES (TTHMs)	2011	25	18 - 25	ppb	80	0	By-product of drinking water chlorination

Lead and Copper	Monitoring Period	90 th Percentile	Range (low/high)	Unit	AL	Sites Over AL	Typical Source
COPPER, FREE	2010	0.0863	0.021 - 0.35	ppm	1.3	0	Corrosion of household plumbing
LEAD	2010	7.5	0.2 - 24	ppb	15	0	Corrosion of household plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Your water system is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Maximum Disinfection Level	MRDL	MRDL Units	RAA	RAA Units	Analyte Code	Analyte Name
02/01/2011 - 02/28/2011	2.2	MG/L	2.1	MG/L	1006	CHLORAMINE

Total Organic Carbon	Number of Samples	RAA	Removal Ratio	Required Removal Ratio
03/01/2011 - 03/31/2011	48	2.2	2.24	1.0 RATIO

Secondary Contaminants	Collection Date	Your Highest Value	Range (low/high)	Unit	SMCL
ALKALINITY, TOTAL	5/23/2011	94.1	94.1	MG/L	300
BROMATE	6/6/2011	14	ND - 14	ppb	10
CALCIUM	5/23/2011	26	26	MG/L	200
CHLORIDE	5/23/2011	120	120	MG/L	250
CONDUCTIVITY @ 25 C UMHO/CM	5/23/2011	720	720	UMHO/CM	1500
HARDNESS, TOTAL (AS CaCO3)	5/23/2011	120	120	MG/L	400
MAGNESIUM	5/23/2011	14	14	MG/L	150
PH	5/23/2011	7.9	7.9	PH	8.5
PHOSPHORUS, TOTAL	5/23/2011	0.06	0.06	MG/L	5
POTASSIUM	5/23/2011	4.4	4.4	MG/L	100
SILICA	5/23/2011	17	17	MG/L	50
SODIUM	5/23/2011	90	90	MG/L	100
SULFATE	5/23/2011	67	67	MG/L	250
TDS	5/23/2011	400	400	MG/L	500
ZINC	5/23/2011	0.0052	0.0052	MG/L	5

During the 2011 calendar year, we had no violation(s) of drinking water regulations.



Public Works & Utilities

2011 Average Chemical Analysis of Treated Water

Constituents	Wichita Level	Units	MDL	MCL
Aluminum	<0.02	mg/L	0.02	
Ammonia-N	0.58	mg/L	0.007	
Antimony	0.2	µg/L	0.1	6
Arsenic	2.5	µg/L	0.05	10
Barium	0.046	mg/L	0.01	2
Beryllium	<1	µg/L	1	4
Bromate	<0.005	mg/L	0.005	TT
Bromide	0.05	mg/L	0.02	
Cadmium	<2	µg/L	2	5
Calcium	28.3	mg/L	0.5	
Calcium Hardness	71	mg/L	0.02	
Chloride	117	mg/L	5	
Chlorine Residual, Combined	2.1	mg/L	0.05	TT
Chromium	<10	µg/L	10	100
Copper	2	µg/L	0.1	TT
Cyanide	<5	µg/L	5	200
Fluoride	0.38	mg/L	0.01	4
Haloacetic Acid	8.4	µg/L	2	60
Iron	<0.1	mg/L	0.1	
Langlier Corrosivity Index	0.19	LCI		
Lead	0.41	µg/L	0.25	TT
Magnesium	14.3	mg/L	0.05	
Manganese	<0.001	mg/L	0.001	
Mercury	<0.1	µg/L	0.1	2
Nickel	<5	µg/L	5	
Nitrate-N	1.01	mg/L	0.01	10
Nitrite/Nitrate-N	1.01	mg/L	0.02	10
Nitrite-N	<0.01	mg/L	0.01	1
Ortho Phosphate-P	0.03	mg/L	0.01	
Partial Alkalinity (as CaCO ₃)	<1	mg/L	1	
pH	8.5	pH UNITS		
Potassium	5.1	mg/L	0.05	
Selenium	3.31	µg/L	0.01	50
Silica	15.6	mg/L	0.05	
Silver	<0.01	mg/L	0.01	
Sodium	94	mg/L	0.1	
Specific Conductance	715	µmhos/cm	2	
Strontium	0.257	mg/L	0.005	
Sulfate	72	mg/L	5	
Temperature	14.6	° C	0.1	
Thallium	<0.25	µg/L	0.25	2
Total Alkalinity (as CaCO ₃)	92	mg/L	2	
Total Dissolved Solids	404	mg/L	10	
Total Hardness (as CaCO ₃)	129	mg/L	1	
Total Organic Carbon	2.3	mg/L	0.1	
Total Phosphorus-P	0.07	mg/L	0.03	
Total Solids	418	mg/L	10	
Total Trihalomethanes	21	µg/L	2	80
Turbidity	<0.1	NTU	0.1	TT
Vanadium	0.003	mg/L	0.002	
Zinc	<0.005	mg/L	0.005	

TT = Treatment Technique

Average tap hardness = 7.5 grains/gal

mg/L = ppm (parts per million)

Sodium in 8 oz glass = 20-25 mg

One (1) grain/gal = 17.1 mg/L

µg/L = ppb (parts per billion)

Additional information is available on the City of Wichita web site www.wichita.gov

February 23, 2012

Chemicals added to the water during purification process listed in the order they are used:

1. Ozone for taste and odor control from surface water at Cheney Reservoir
2. Polyelectrolyte - coagulant aid
3. Ferric Sulfate – coagulant
4. Lime - softens by removing minerals
5. Carbon Dioxide - reduces the pH after softening and stabilizes the pH
6. Phosphate - stabilizes the water & reduces corrosion
7. Chlorine - disinfects the water
8. Anhydrous Ammonia - combines with chlorine to make chloramine, which allows the water to be disinfected longer